

Remarks/Arguments

In the non-final Office Action dated June 2, 2008, it is noted that claims 1-20 are pending; that claim 11 stands rejected under 35 U.S.C. §101; that claim 11 stands rejected under 35 U.S.C. §112; that claims 1, 6, and 7-11 stand rejected under 35 U.S.C. §102; and that claims 2-5 stand rejected under 35 U.S.C. §103.

By this amendment, claim 1 has been amended to include substantially all the limitations of claim 2; claim 6 has been amended to include substantially similar limitations to those in claim 2; claim 7 has been amended to include substantially all the limitations of claim 8; claim 10 has been amended to include substantially similar limitations to those in claim 8; the dependencies for claims 3, 4, and 9 have been amended to account for the claim cancellations; claims 2, 8, and 11 have been cancelled; and claims 12-20 have been formally withdrawn. Also, claims 7 and 10 have been amended to correct a term to show proper antecedent basis therefor. Claim 10 has also been amended to clarify further an aspect of the claimed subject matter. Formal election of Group I claims has been made consistent with the constructive election noticed in the present Office Action.

Election/Restriction

In the present Office Action, it is stated both that claims 12-20 have been withdrawn from consideration as being drawn to a non-elected invention and that claims 1-11 have been constructively elected since the newly presented claims 12-20 were added after an action on the merits. Applicant concurs with the election of Group I, namely, claims 1-11, and hereby withdraws these claims with traverse and without prejudice.

Rejection of Claim 11 under 35 U.S.C. §101

Claim 11 stands rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. In view of the cancellation of claim 11, this rejection is now moot.

Rejection of Claim 11 under 35 U.S.C. §112

Claim 11 stands rejected under 35 U.S.C. §112, first paragraph as failing to comply with the enablement requirement. In view of the cancellation of claim 11, this rejection is now moot.

Cited Art

The references cited and applied against the claims are listed as follows: “Design and Analysis of Digital Watermarking Information Embedding and Data Hiding System”, a Ph. D. Dissertation at MIT by Brian Chen (hereinafter referenced as “Chen”) and U. S. Patent 7,006,656 to Fridrich et al. (hereinafter referenced as “Fridrich”).

Rejection of Claims 1 and 6 under 35 U.S.C. §102

Claims 1 and 6 stand rejected under 35 U.S.C. §102 as being anticipated by Chen. Claims 1 and 6 have been amended. In view of the amendments to the claims, this rejection is respectfully traversed.

Claims 1 and 6 are independent claims that include substantially similar limitations. In view of the similarities between these claims, the remarks below will be made with reference to claim 1, but will be understood to apply equally to claim 6.

On page 10 of the present Office Action, it is stated that “Chan [*sic*] doesn’t specifically teaches [*sic*] accommodating in a segment the restoration data for a previous segment.” Claim 1, as amended, calls in part for: “accommodating in a segment the restoration data for a previous segment.” Since it is admitted that Chen lacks any teaching or suggestion about this limitation, it is submitted that Chen does not teach all the elements of claim 1. Since claim 6 includes a similar limitation to the one noted above in claim 1, it is also submitted that Chen does not teach all the elements of claim 6.

In light of the remarks above, it is submitted that the elements of claims 1 and 6 are not anticipated by Chen and would not have been obvious to a person of ordinary skill in the art upon a reading of Chen. Therefore, it is believed that claims 1 and 6 are allowable under 35 U.S.C. §102 and 35 U.S.C. §103. Withdrawal of this rejection is respectfully requested.

Rejection of Claims 7-11 under 35 U.S.C. §102

Claims 7-11 stand rejected under 35 U.S.C. §102 as being anticipated by Fridrich. Claims 8 and 11 have been cancelled. In view of the amendments to claims 7 and 10, this rejection is respectfully traversed.

Claims 7 and 10 are independent claims that include substantially similar limitations. Claim 9 depends directly from claim 7. In view of the similarities between the independent

claims, the remarks below will be made with reference to claim 7, but will be understood to apply equally to claim 10.

Claim 7, as amended, calls for:

A method of reconstructing a host signal from a composite signal representing a distorted version of said host signal with data embedded therein, the method comprising the steps of:
 retrieving the embedded data from the composite signal;
 splitting the embedded data into restoration data and auxiliary data,
 the restoration data identifying distorted symbols in the distorted version of the host signal;
 reconstructing the host signal using the restoration data, given the composite signal;
 dividing the composite signal into successive segments; and
 using the restoration data accommodated in a segment for reconstructing a previous segment of the host signal. [Emphasis supplied].

The emphasized portion of claim 7 is neither taught, nor shown, nor suggested by Fridrich.

Fridrich appears to disclose a method and system for losslessly embedding watermark data into a host signal, so that the data can be retrieved from the embedded signal. Certain data from the host signal appear to be compressed by a lossless algorithm and then supplemented by the watermark (auxiliary) data.

Fridrich does not disclose the limitation of accommodating in a segment of the host signal the restoration data for a previous segment, as defined in claim 7. In the present invention, the claimed feature that “the restoration data accommodated in a [host signal] segment for reconstructing a previous segment of the host signal” permits an efficient implementation of the method and apparatus to be realized. As a result, the embedding process can be performed swiftly because the restoration data is computed while the composite signal is being assembled. Similarly, the reconstruction process is more efficient because a host signal can be reconstructed using information in a prior segment to the one including the corresponding composite signal.

Fridrich appears to teach that the restoration data regarding a particular signal segment is included in that same particular segment. This makes the embedding and restoration processes highly complex and inefficient. For these reasons, it is submitted that Fridrich does not teach, show, or suggest all the elements of claim 7. Since claim 10 includes a similar limitation to the one noted above in claim 7, it is also submitted that Fridrich does not teach all the elements of claim 10.

In light of the remarks above, it is submitted that the elements of claims 7 and 10 and dependent claim 9 are not anticipated by Fridrich and would not have been obvious to a person

of ordinary skill in the art upon a reading of Fridrich. Therefore, it is believed that claims 7, 9, and 10 are allowable under 35 U.S.C. §102 and 35 U.S.C. §103. Withdrawal of this rejection is respectfully requested.

Rejection of Claims 2-5 under 35 U.S.C. §103

Claims 2-5 stand rejected under 35 U.S.C. §103 as being unpatentable over Chen in view of Fridrich. Claim 2 has been cancelled. This rejection is respectfully traversed.

As noted above, the limitations from claim 2 have been included into claim 1. In view of the amendment to claim 1, the following remarks will be directed to amended claim 1 since it has been amended to include substantially those limitations from now cancelled claim 2.

Fridrich and Chen have been discussed above. The present Office Action admits that Chen does not teach the limitation of “accommodating in a segment the restoration data for a previous segment.” Fridrich was added to Chen to allegedly supply the teachings for this limitation. However, Fridrich lacks any such teaching in the cited section and in the remaining portions of the reference.

As discussed in the remarks in the section immediately above, Fridrich does not teach, show, or suggest that the compressed coefficient data for a segment or block should be inserted into the next block or segment. It appears that one can only interpret Fridrich as teaching that the compressed coefficient data is placed in the very same block or segment to which it corresponds. Nowhere does Fridrich suggest “accommodating in a segment the restoration data for a previous segment,” as defined in amended claim 1. Thus, the combination of Fridrich and Chen does not teach, show, or suggest all the elements of claim 1 (now including the limitations of cancelled claim 2) and the claims dependent thereon.

In light of these remarks, it is believed that the subject matter of claim 1 and dependent claims 3-5 would not have been obvious to a person of ordinary skill in the art upon a reading of Chen and Fridrich, either separately or in combination. Thus, it is submitted that claims 1 and 3-5 are allowable under 35 U.S.C. §103. Withdrawal of this rejection is respectfully requested.

Conclusion

In view of the foregoing, it is respectfully submitted that all the claims pending in this patent application are in condition for allowance. Reconsideration and allowance of all the claims are respectfully solicited.

In the event there are any errors with respect to the fees for this response or any other papers related to this response, the Director is hereby given permission to charge any shortages and credit any overcharges of any fees required for this submission to Deposit Account No. 14-1270.

Respectfully submitted,

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